

Title (en)

Ink composition, inkjet recording method, printed material, process for producing lithographic plate, and lithographic printing plate

Title (de)

Tintenzusammensetzung, Tintenstrahldruckverfahren, bedrucktes Material, Methode zur Herstellung einer lithographischen Druckplatte, lithographische Druckplatte

Title (fr)

Composition d'encre, méthode d'enregistrement par jet d'encre, produit imprimé, procédé de fabrication d'une plaque d'impression lithographique, plaque d'impression lithographique

Publication

EP 1762599 A1 20070314 (EN)

Application

EP 06018345 A 20060901

Priority

JP 2005259248 A 20050907

Abstract (en)

An ink composition is provided that includes a cationically polymerizable compound (a), a compound (b) that generates an acid when exposed to radiation, a colorant (c), and a salt of a weak acid having a pKa of 4 to 8 (d). There is also provided an inkjet recording method that includes a step of discharging the ink composition onto a recording medium, and a step of irradiating the discharged ink composition with radiation so as to cure the ink composition.

IPC 8 full level

B41C 1/10 (2006.01); **B41J 2/01** (2006.01); **B41M 5/00** (2006.01); **C09D 11/00** (2014.01); **C09D 11/322** (2014.01); **C09D 11/326** (2014.01); **C09D 11/328** (2014.01); **C09D 11/38** (2014.01)

CPC (source: EP US)

C09D 11/101 (2013.01 - EP US); **Y10T 428/24802** (2015.01 - EP US)

Citation (applicant)

- JP S63235382 A 19880930 - SEIKO EPSON CORP
- JP H03216379 A 19910924 - CANON KK
- JP H05214280 A 19930824 - DOMINO PRINTING SCIENCES PLC
- JP H0621256 B2 19940323
- JP H0662905 B2 19940817
- JP 2003192943 A 20030709 - KONISHIROKU PHOTO IND
- JP 2003192944 A 20030709 - KONISHIROKU PHOTO IND
- JP H09183928 A 19970715 - NIPPON KAYAKU KK
- JP 2003312121 A 20031106 - KONICA MINOLTA HOLDINGS INC
- JP 2003341217 A 20031203 - KONICA MINOLTA HOLDINGS INC
- JP 2004091558 A 20040325 - KONICA MINOLTA HOLDINGS INC
- JP H069714 A 19940118 - SUMITOMO CHEMICAL CO
- JP 2001031892 A 20010206 - TOYO INK MFG CO
- JP 2001040068 A 20010213 - ASAHI DENKA KOGYO KK
- JP 2001055507 A 20010227 - KANSAI PAINT CO LTD
- JP 2001310938 A 20011106 - SHOWA DENKO KK
- JP 2001310937 A 20011106 - HITACHI CHEMICAL CO LTD
- JP 2001220526 A 20010814 - BROTHER IND LTD
- JP 2004091556 A 20040325 - KONICA MINOLTA HOLDINGS INC
- US 4069055 A 19780117 - CRIVELLO JAMES V
- US 4069056 A 19780117 - CRIVELLO JAMES V
- JP H03140140 A 19910614 - HITACHI LTD
- EP 0104143 A1 19840328 - CIBA GEIGY AG [CH]
- JP H02150848 A 19900611 - HITACHI LTD, et al
- JP H02296514 A 19901207 - MATSUSHITA ELECTRIC IND CO LTD
- EP 0370693 A2 19900530 - EASTMAN KODAK CO [US]
- EP 0161811 A2 19851121 - NIPPON OILS & FATS CO LTD [JP]
- EP 0410201 A1 19910130 - DOLOMITE SPA [IT]
- EP 0339049 A1 19891102 - CATERPILLAR INC [US]
- EP 0233567 A2 19870826 - BASF AG [DE]
- EP 0297443 A2 19890104 - BASF AG [DE]
- EP 0297442 A1 19890104 - BASF AG [DE]
- US 3902114 A 19750826 - ALICH GUNTHER
- US 4933377 A 19900612 - SAEVA FRANKLIN D [US], et al
- US 4760013 A 19880726 - HACKER NIGEL P [US], et al
- US 4734444 A 19880329 - HENNE ANDREAS [DE], et al
- US 2833827 A 19580506 - WILLI HAHN, et al
- DE 2904626 A1 19790809 - MINNESOTA MINING & MFG
- DE 3604580 A1 19870820 - BASF AG [DE]
- DE 3604581 A1 19870820 - BASF AG [DE]
- JP H0728237 A 19950131 - NEC CORP
- JP H0827102 A 19960130 - NEC CORP
- US 3905815 A 19750916 - BONHAM JAMES A
- JP S464605 B1
- JP S4836281 A 19730528
- JP S5532070 A 19800306 - FUJI PHOTO FILM CO LTD
- JP S60239736 A 19851128 - FUJI PHOTO FILM CO LTD
- JP S61169835 A 19860731 - FUJI PHOTO FILM CO LTD
- JP S61169837 A 19860731 - FUJI PHOTO FILM CO LTD

- JP S6258241 A 19870313 - FUJI PHOTO FILM CO LTD
- JP S62212401 A 19870918 - FUJI PHOTO FILM CO LTD
- JP S6370243 A 19880330 - FUJI PHOTO FILM CO LTD
- JP S63298339 A 19881206 - FUJI PHOTO FILM CO LTD
- JP H02161445 A 19900621 - FUJITSU LTD
- EP 0290750 A2 19881117 - XYTRONYX INC [US]
- EP 0046083 A2 19820217 - MINNESOTA MINING & MFG [US]
- EP 0156535 A2 19851002 - MINNESOTA MINING & MFG [US]
- EP 0271851 A2 19880622 - DU PONT [US]
- EP 0388343 A2 19900919 - IBM [US]
- US 3901710 A 19750826 - RANZ ERWIN, et al
- US 4181531 A 19800101 - PILZ OTTO [DE]
- JP S60198538 A 19851008 - TOSHIBA KK
- JP S53133022 A 19781120 - DU PONT
- EP 0199672 A1 19861029 - CIBA GEIGY AG [CH]
- EP 0084515 A2 19830727 - CIBA GEIGY AG [CH]
- EP 0044115 A1 19820120 - AKZO NV [NL]
- EP 0618564 A1 19941005 - GEC ALSTHOM TRANSPORT SA [FR]
- EP 0101122 A1 19840222 - AKZO NV [NL]
- US 4371605 A 19830201 - RENNER CARL A
- US 4431774 A 19840214 - FELDER-SCHRANER LOUIS [CH], et al
- JP S6418143 A 19890120 - NIPPON KAYAKU KK
- JP H02245756 A 19901001 - HITACHI LTD, et al
- JP H03140109 A 19910614 - SILVER SYST LTD
- JP S61166544 A 19860728 - FUJI PHOTO FILM CO LTD
- JP H0271270 A 19900309 - CIBA GEIGY AG
- JP H03103854 A 19910430 - HOECHST AG
- JP H03103856 A 19910430 - HOECHST AG
- JP H04210960 A 19920803 - WAKO PURE CHEM IND LTD
- US 3849137 A 19741119 - BARZYNSKI H, et al
- DE 3914407 A1 19901031 - BASF AG [DE]
- JP S6326653 A 19880204 - TOSOH CORP
- JP S55164824 A 19801222 - BASF AG
- JP S6269263 A 19870330 - TOSHIBA CORP
- JP S63146038 A 19880618 - TOSHIBA CORP
- JP S63163452 A 19880706 - CIBA GEIGY AG
- JP S62153853 A 19870708 - TOSHIBA CORP
- JP S63146029 A 19880618 - TOSHIBA CORP
- US 3779778 A 19731218 - SMITH G, et al
- EP 0126712 A1 19841128 - CIBA GEIGY AG [CH]
- JP 2002122994 A 20020426 - FUJI PHOTO FILM CO LTD
- JP 2002012607 A 20020115 - MITSUBISHI CHEM CORP
- JP 2002188025 A 20020705 - TOYO INK MFG CO
- JP 2003026978 A 20030129 - RICOH KK
- JP 2003342503 A 20031203 - KONICA MINOLTA HOLDINGS INC
- JP 2004250483 A 20040909 - FUJI PHOTO FILM CO LTD
- JP 2002114930 A 20020416 - FUJI PHOTO FILM CO LTD
- JP 2002121414 A 20020423 - FUJI PHOTO FILM CO LTD
- JP 2001181547 A 20010703 - FUJI PHOTO FILM CO LTD
- JP S58185677 A 19831029 - KONISHIROKU PHOTO IND
- JP S61190537 A 19860825 - CIBA GEIGY AG
- JP H02782 A 19900105 - CIBA GEIGY AG
- JP H05197075 A 19930806 - CIBA GEIGY AG
- JP H0934057 A 19970207 - EASTMAN KODAK CO
- JP S462784 A 19711021
- JP H05194483 A 19930803 - CIBA GEIGY AG
- US 3214463 A 19651026 - CHARLES SCHOENTHALER ARNOLD, et al
- JP S4830492 B1 19730920
- JP S5621141 B2 19810518
- JP H1088106 A 19980407 - EASTMAN KODAK CO
- JP H04298503 A 19921022 - CIBA GEIGY AG
- JP H0853427 A 19960227 - CIBA GEIGY AG
- JP H08239368 A 19960917 - CIBA GEIGY AG
- JP H10182621 A 19980707 - CIBA GEIGY AG
- JP H08501291 A 19960213
- EP 0223739 A1 19870527 - CIBA GEIGY AG [CH]
- EP 0309401 A1 19890329 - CIBA GEIGY AG [CH]
- EP 0309402 A1 19890329 - CIBA GEIGY AG [CH]
- EP 0310551 A2 19890405 - CIBA GEIGY AG [CH]
- EP 0310552 A1 19890405 - CIBA GEIGY AG [CH]
- EP 0459416 A2 19911204 - FUJI PHOTO FILM CO LTD [JP]
- DE 3435443 A1 19860403 - AGFA GEVAERT AG [DE]
- JP S5448535 A 19790417 - KONISHIROKU PHOTO IND
- JP S62262047 A 19871114 - EASTMAN KODAK CO
- JP S63113536 A 19880518 - EASTMAN KODAK CO
- JP S63163351 A 19880706 - KONISHIROKU PHOTO IND
- JP H02262654 A 19901025 - FUJI PHOTO FILM CO LTD
- JP H0271262 A 19900309 - FUJI PHOTO FILM CO LTD
- JP H03121449 A 19910523 - FUJI PHOTO FILM CO LTD
- JP H0561166 A 19930312 - FUJI PHOTO FILM CO LTD
- JP H05119449 A 19930518 - FUJI PHOTO FILM CO LTD
- US 4814262 A 19890321 - SUGITA SHUICHI [JP], et al
- US 4980275 A 19901225 - GODDARD JOHN D [GB]

- JP S62215272 A 19870921 - FUJI PHOTO FILM CO LTD
- JP S62173463 A 19870730 - FUJI PHOTO FILM CO LTD
- JP S62183457 A 19870811 - FUJI PHOTO FILM CO LTD
- JP S579053 B2 19820219
- JP S62135826 A 19870618 - KONISHIROKU PHOTO IND
- JP 2001049200 A 20010220 - SOKEN KAGAKU KK
- JP S60132767 A 19850715 - SEIKOSHA KK
- WO 9954415 A1 19991028 - NOF CORP [JP], et al
- US 6084250 A 20000704 - JUESTEL THOMAS [DE], et al
- JP S5463902 A 19790523 - FUJI PHOTO FILM CO LTD
- JP 2001253181 A 20010918 - FUJI PHOTO FILM CO LTD
- JP 2001322365 A 20011120 - FUJI PHOTO FILM CO LTD
- US 2714066 A 19550726 - JEWETT CLIFFORD L, et al
- US 3181461 A 19650504 - FROMSON HOWARD A
- US 3280734 A 19661025 - FROMSON HOWARD A
- US 3902734 A 19750902 - FIER RAYMOND L
- JP 3622063 B2 20050223
- US 3276868 A 19661004 - FRITZ UHLIG
- US 4153461 A 19790508 - BERGHAUSER GUNTER, et al
- US 4689272 A 19870825 - SIMON ULRICH [DE], et al
- S. I. SCHLESINGER, PHOTOGR. SCI. ENG., vol. 18, 1974, pages 387
- T. S. BAL, POLYMER, vol. 21, 1980, pages 423
- D. C. NECKER, MACROMOLECULES, vol. 17, 1984, pages 2468
- C. S. WEN, THE. PROC. CONF. RAD. CURING ASIA, October 1988 (1988-10-01), pages 478
- J. V. CRIVELLO, MACROMOLECULES, vol. 10, no. 6, 1977, pages 1307
- CHEM. ENG. NEWS, 28 November 1988 (1988-11-28), pages 31
- J. V. CRIVELLO, POLYMER J., vol. 17, 1985, pages 73
- J. V. CRIVELLO, J. ORG. CHEM., vol. 43, 1978, pages 3055
- W.R. WATT, J. POLYMER SCI., POLYMER CHEM. ED., vol. 22, 1984, pages 1789
- J. V. CRIVELLO, POLYMER BULL., vol. 14, 1985, pages 279
- J. V. CRIVELLO, MACROMOLECULES, vol. 14, no. 5, 1981, pages 1141
- J. V. CRIVELLO, J. POLYMER SCI., POLYMER CHEM. ED., vol. 17, 1979, pages 2877
- J. V. CRIVELLO, J. POLYMER SCI., POLYMER CHEM. ED., vol. 17, 1979, pages 1047
- C. S. WEN, THE PROC. CONF. RAD. CURING ASIA, October 1988 (1988-10-01), pages 478
- K. MEIER, J. RAD. CURING, vol. 13, no. 4, 1986, pages 26
- T. P. GILL, INORG. CHEM., vol. 19, 1980, pages 3007
- D. ASTRUC, ACC. CHEM. RES., vol. 19, no. 12, 1986, pages 377
- S. HAYASE, J. POLYMER SCI., vol. 25, 1987, pages 753
- E. REICHMANIS, J. POLYMER SCI., POLYMER CHEM. ED., vol. 23, 1985, pages 1
- Q. Q. ZHU, J. PHOTOCHEM., vol. 36, 85., 1987, pages 317
- B. AMIT, TETRAHEDRON LETT., no. 24, 1973, pages 2205
- D. H. R. BARTON, J. CHEM. SOC., 1965, pages 3571
- P. M. COLLINS, J. CHEM. SOC., vol. 1, 1975, pages 1695
- M. RUDINSTEIN, TETRAHEDRON LETT., no. 17, 1975, pages 1445
- J. W. WALKER, J. AM. CHEM. SOC., vol. 110, 1988, pages 7170
- S.C. BUSMAN, J. IMAGING TECHNOL., vol. 11, no. 4, 1985, pages 191
- H. M. HOULIHAN, MACROMOLECULES, vol. 21, 1988, pages 2001
- P.M. COLLINS, J. CHEM. SOC., 1972, pages 532
- S. HAYASE, MACROMOLECULES, vol. 18, 1985, pages 1799
- E. REICHMANIS, J. ELECTROCHEM. SOC., vol. 130, no. 6
- F. M. HOULIHAN, MACROMOLECULES, 1988, pages 2001
- M. TUNOOKA, POLYMER PREPRINTS JAPAN, vol. 35, no. 8
- G. BERNER, J. RAD. CURING, vol. 13, no. 4
- W. J. MIJS, COATING TECHNOL., vol. 55, no. 697, 1983, pages 45
- AKZO, H. ADACHI, POLYMER PREPRINTS JAPAN, vol. 37, no. 3
- M. E. WOODHOUSE, J. AM. CHEM. SOC., vol. 104, 1982, pages 5586
- S. P. PAPPAS, J. IMAGING SCI., vol. 30, no. 5, 1986, pages 218
- S. KONDO, MAKROMOL. CHEM., RAPID COMMUN., vol. 9, 1988, pages 625
- Y. YAMADA, MAKROMOL. CHEM., vol. 152, 15, 1972
- J. V. CRIVELLO, J. POLYMER SCI., POLYMER CHEM. ED., vol. 17, 1979, pages 3845
- V. N. R. PILLAI, SYNTHESIS, vol. 1, no. 1, 1980
- A. ABAD, TETRAHEDRON LETT., no. 47, 1971, pages 4555
- D. H. R. BARTON, J. CHEM. SOC., (C, vol. 329, 1970
- W. HERBST; K. HUNGER: "GANRYO NO JITEN", 2000, article "Industrial Organic Pigments"
- P. DELAHAY: "NEW INSTRUMENTAL METHODS IN ELECTROCHEMISTRY", 1954, INTERSCIENCE PUBLISHERS
- A. J. BARD: "ELECTROCHEMICAL METHODS", 1980, JOHN WILEY & SONS
- AKIRA FUJISHIMA: "DENKIKAGAKU SOKUTEIHO", 1984, GIHODO SHUPPAN SHA
- AKIRA FUJISHIMA: "DENKIKAGAKU SOKUTEIHO", 1984, GIHODO SHUPPAN SHA, pages: 101 - 118

Citation (search report)

- [E] EP 1700890 A2 20060913 - FUJI PHOTO FILM CO LTD [JP]
- [A] US 2005148687 A1 20050707 - SASA NOBUMASA [JP]

Cited by

EP2065449A3; US7618683B2; US8240838B2; US10180248B2; US8044167B2; US8044226B2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK YU

DOCDB simple family (publication)

EP 1762599 A1 20070314; EP 1762599 B1 20080305; AT E388208 T1 20080315; DE 602006000645 D1 20080417;
DE 602006000645 T2 20090305; JP 2007070477 A 20070322; JP 4757574 B2 20110824; US 2007052790 A1 20070308;
US 7709550 B2 20100504

DOCDB simple family (application)

EP 06018345 A 20060901; AT 06018345 T 20060901; DE 602006000645 T 20060901; JP 2005259248 A 20050907; US 51665006 A 20060907